STATUS REPORT FOR FUMIGANT PESTICIDES

December, 2003

I. SCHEDULED AIR MONITORING

The Air Resources Board (ARB) has a network of stations that routinely monitor California's air for a variety of pollutants such as ozone, particulate matter, metals, and other toxic air contaminants. In 2002, ARB began monitoring for methyl bromide and 1,3-dichloropropene every 12 days at approximately 20 stations in primarily urban areas throughout the State. Results of monitoring in 2002 are available from the following ARB Web page:

http://www.arb.ca.gov/aqd/toxics/toxics.html

No other ambient air monitoring is scheduled for any fumigants in 2004. Some fumigants are scheduled for application site monitoring, as described below.

II. ACUTE BUFFER ZONE MODELING

DPR utilizes a standard methodology to calculate buffer zones for acute exposures. Fumigant pesticide registrants and some grower groups have suggested some specific refinements to the current modeling methodology that they believe will improve the procedure and incorporate local information and more representative meteorological conditions. Industry has proposed an alternative approach to DPR's modeling procedures. Their approach would incorporate historical weather data, revising the method to estimate flux and the method to determine the size of buffer zones. The alternative approach would be utilized by the industry at their discretion in specific areas. The standard DPR model would remain in place statewide. DPR awaits the industry's results of using their methodology to identify regions of the state with comparable weather conditions through statistical analysis once weather data have been gathered and incorporated into the model.

III. METHYL BROMIDE

1. Risk Assessment/Data Evaluation

   - DPR scientists have completed revisions to the methyl bromide risk characterization document for inhalation (February 14, 2002) to incorporate the National Academy of Science peer review comments. This risk characterization document for methyl bromide has been approved and distributed.

2. Risk Management Status

- As a result of lawsuits, court orders and settlements outlined in the September 2003 edition of this report, DPR has proposed to permanently adopt methyl bromide field fumigation regulations focusing on mitigating possible acute (short-term) and subchronic (seasonal) methyl bromide exposure hazards to the public and agricultural employees. The 45-day public comment period was recently extended to December 18th. DPR held hearings in mid-November in Ventura, Salinas, and Sacramento.

- Information on the methyl bromide regulatory issues is found at the following DPR Web site:
  http://www.cdpr.ca.gov/docs/dprdocs/methbrom/fum_regs.htm

3. Critical Use Exemption Under the Clean Air Act

- U.S. EPA created opportunities for seeking a critical use exemption (CUE) allowing the use of methyl bromide after the complete phase out in 2005. U.S. EPA submitted a nomination package with other federal agencies to the Secretariat of the Montreal Protocol in January 2003. The package included several California commodities from last year's applicants. In June 2003, U.S. EPA sponsored a workshop in Parlier to help explain requirements for resubmission of CUE applications for applicants from last year, and to walk through the process for prospective new applicants. The workshop also included a session to elicit comments and suggestions for U.S. EPA to consider in its forthcoming rulemaking proposal on allocating CUEs among methyl bromide users.

IV. 1,3-DICHLOROPROPENE

- DPR continues to use the California Management Plan: 1,3-Dichloropropene (1,3-D) to manage the use of 1,3-D throughout California.

- Information on the California Management Plan: 1,3-Dichloropropene is found at the following DPR Web site:
  http://www.cdpr.ca.gov/docs/dprdocs/methbrom/telone/mgmtplan.pdf

- Enforcement Letter, ENF 02-37 Recommended Permit Conditions for Using 1,3-D Pesticides (Fumigant) provides guidance to county agricultural commissioners and is posted on DPR's Web site at:
  http://www.cdpr. ca.gov/docs/enfcmpli/penfltrs/penf2002/2002menu.htm

V. CHLOROPICRIN

1. Risk Assessment/Data Evaluation

- ARB conducted ambient air monitoring for chloropicrin during the 2001 pesticide use season. ARB conducted monitoring at the same 12 sites and time periods as the other fumigants. The final report for Kern County is posted on the following DPR Web site:
  http://www.cdpr.ca.gov/docs/dprdocs/methbrom/recent_pubs.htm

- DPR should receive the final report for Monterey/Santa Cruz shortly. ARB also conducted air monitoring near a chloropicrin application site during November 2003.

- DPR requested that ARB conduct monitoring for another application site in 2004.

- On October 16, 2001, DPR placed all products containing chloropicrin into reevaluation. The reevaluation is based on data submitted under the Birth Defect Prevention Act. These data indicate that chloropicrin has the potential to cause adverse health effects at low doses. Air monitoring data submitted by the Chloropicrin Manufacturers Task Force indicate that the air levels of chloropicrin at some distances from treated greenhouses or fields could exceed the NIOSH standard of 0.1 ppm. Under the reevaluation, chloropicrin registrants are required to submit: (1) worker exposure studies for each type of chloropicrin fumigation site, and (2) ambient air quality monitoring and flux measurements from field and greenhouse applications, if methods other than the ones for which DPR already has data are to be employed.

- In May 2002, DPR received draft protocols for a worker exposure and air monitoring study, and a vapor trapping efficiency study. In August 2002, in response to DPR's review, the Task Force submitted a revised draft protocol for the worker exposure and air monitoring studies. Fieldwork is projected to be conducted October 2002 through October 2003.

- Chloropicrin is currently in the risk assessment process.

VI. MITC GENERATING COMPOUNDS

1. Risk Assessment/Data Evaluation

- ARB conducted ambient air monitoring for MITC and methyl isocyanate during the 2001 pesticide use season. ARB conducted monitoring at the same 12 sites and time periods as the other fumigants. The final report for Kern County is posted on the following DPR Web site:
  http://www.cdpr.ca.gov/docs/dprdocs/methbrom/recent_pubs.htm

- DPR should receive the final report for Monterey/Santa Cruz shortly.

- Based on DPR's toxic air contaminant risk assessment and the Scientific Review Panel's findings in 2002, DPR designated MITC and other pesticides that generate MITC as toxic air contaminants through the rulemaking process. This regulation (Title 3 CCR section 6860) became effective on June 21, 2003.

- In April 2002, the Metam Sodium Manufacturers Task Force submitted several reports containing monitoring data of current application practices and modified application practices.

2. Risk Management Status

- DPR received the findings of the SRP and released the risk assessment. DPR initiated the process of developing mitigation measures to reduce acute offsite exposures. DPR requested a proposal from the registrants on mitigation measures to address these exposures.

- On December 2, 2002, DPR issued a public document that outlines its risk management decision.

- DPR received mitigation proposals from the Metam Sodium Manufacturers Task Force and one other registrant in March 2003. DPR reviewed the proposals and is preparing a mitigation strategy. DPR will meet with registrants, county agricultural commissioners, and other stakeholders before finalizing the document.

VII. SULFURYL FLUORIDE

1. Risk Assessment/Data Evaluation

- Sulfuryl fluoride is currently in the risk assessment process.

- DPR has proposed a 2004 schedule to ARB and the Office of Environmental Health Hazard Assessment for presenting sulfuryl fluoride as a potential toxic air contaminant to the AB 1807 Scientific Review Panel.

- ARB monitored a structural fumigation in Sacramento County during October 2002. The final report is posted to the following DPR Web site: http://www.cdpr.ca.gov/docs/dprdocs/methbrom/recent_pubs.htm

- ARB will likely monitor additional structural fumigations in 2003 and 2004.

VIII. POTENTIAL NEW FUMIGANTS/FUMIGANT ALTERNATIVES

- DPR has received applications from Arvesta, formerly Tomen Agro, to register products containing the active ingredient iodomethane (methyl iodide). DPR and the U.S. Environmental Protection Agency are conducting a joint review of the off-site air monitoring data.

IX. VOLATILE ORGANIC COMPOUNDS

- Volatile organic compounds (VOCs) contribute to the formation of tropospheric ozone, which is harmful to human health when present at high enough concentrations. Many active and inert ingredients in pesticide products are VOCs. The federal Clean Air Act requires each state to submit a state implementation plan (SIP) for achieving and maintaining federal ambient air quality standards including the standard for ozone. ARB and the San Joaquin Valley Air Pollution Control District are scheduled to complete a SIP in early 2004 that will describe the steps to attain the ozone standard by 2010 in the San Joaquin Valley. ARB estimates that all sources, including pesticides, will need to reduce VOC emissions an additional 30 percent between 2005 and 2010 in order to achieve the ozone standard. DPR is working with ARB and others to incorporate possible reduction options for VOC emissions from pesticides in the SIP. DPR estimates that 50-60 percent of VOC emissions from pesticides are due to fumigants.